University of Alberta

A Model of Older Adult Physical Activity Participation

by

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A thesis submitted to the Faculty of Graduate Studies and Research in partial fulfilment of the requirement for the degree of Master of Arts

in

Exercise Gerontology

Department of Physical Education and Recreation

Edmonton, Alberta

Spring, 1998

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The undersigned certify that they have read, and recommended to the Faculty of Graduate Studies and Research for acceptance, a thesis entitled, A Model of Older Adult Physical Activity Participation submitted by Kerri Anne Edwards in partial fulfilment of the requirements for the degree of Master of Arts.

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1 December, 1997

DEDICATION

To Mum and Dad.

Thankyou for nurturing both my curiosity and my confidence to believe.

ABSTRACT

While the social, psychological and physiological benefits of physical activity are becoming increasingly well-known, little is known about the intrinsic barriers to or motivating factors for older adults' physical activity participation. The purpose of this study was to identify why some older adults participate in a physically active lifestyle, while others do not. A strategic sample of 13 (representing men and women/active and inactive) was extracted from a larger data set of a semi-structured interviews from a similar study. A model to explain older adult physical activity participation emerged from the dialogue. This model suggests that physically active behaviour is associated with the perceived likely positive outcomes of physical activity in relation to personal goals, which in turn, is associated with previous positive personal experience of physical activity. Personal experience of physical activity was demonstrated to be associated with four main factors, including perceived self-efficacy for physical activity, social reinforcement for physical activity, personal identity and type of physical activity. A number of possible gender issues were also suggested; the nature of which warrant further investigation.

ACKNOWLEDGEMENTS

I would like to express my sincere appreciation to the participants of this research, who so willingly shared with me their personal experiences. Your touching insights kept me motivated through this process.

Thanks also to my advisor, Dr Sandy O'Brien Cousins, who's guidance throughout my program is very much appreciated. I would also like to thank my examining committee, Dr Wendy Rodgers and Dr Norah Keating for their direction and expertise during the course of the study.

Finally, I wish to express heartfelt thanks to my family, for their relentless encouragement and support. Sincere thanks also to my friends, especially Trish, for her encouragement and culinary talents!

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CHAPTER 1
INTRODUCTION

Rationale for the Study

Evidence exists that a physically inactive lifestyle places individuals at a higher risk of early death and disability, while an active lifestyle leads to well-documented health benefits (Blair et.al., 1989; Wankel & Berger, 1991). The positive health outcomes of active living are especially pertinent for older adults, who are considered more vulnerable to the effects of sedentary living (O'Brien & Vertinsky, 1991; O'Brien Cousins & Keating, 1995). Of independent-living persons aged 85 years and over, 48% required assistance with daily living in 1982 (Fiatarone & Evans, 1990). This was largely attributed to limited functional ability as a result of generalised muscle weakness, poor endurance, neuromuscular disorders and impairment of gait and balance. It has been suggested that a significant part of this loss of physiologic integrity in the elderly is attributable to physical inactivity and disuse syndromes (Fiatarone & Evans, 1990).

Further research has clearly indicated that a commitment made to an active lifestyle does, indeed, play an important role in maintaining one's mobility and physical independence. These abilities are promoted by the long term benefits of habitual exercise such as improved joint flexibility, muscular strength and endurance, increased muscle mass, the retardation of osteoporosis and increased bone mineralisation (O'Brien Cousins & Vertinsky, 1991).

The broad health benefits of regular physical activity are becoming increasingly acknowledged. Indeed Bortz (1980) claims that there is no single medication that can help overcome the range of conditions for which exercise has been prescribed: obesity, depression, arthritis, hypertension, coronary heart disease, osteoporosis, migraine, insomnia and other states. Research suggests that exercise alone can slow the aging process by elevating and maintaining physiologic function at levels typical of adults

decades younger (O'Brien Cousins & Burgess, 1992).

In 1994, seniors represented approximately 12% of the population, yet accounted for almost 40% of the total health care expenditures in Canada (Health Canada, 1996). It is projected that by the year 2025, 18% of the population will be elderly (Tamblyn & Perrault, 1997), so at this rate it would be expected that they would account for 45% or more of the entire health care budget. Consequently, increasing the activity levels of older adults is of particular interest, in the rapidly aging Canadian society which will need to find cost-effective ways to enhance the well-being, life quality and independence of its citizens.

Statement of the Problem

Despite public awareness of the benefits of physical activity (Backett, 1992), only 15% of seniors report that they exercise frequently or on a daily basis (Health Canada, 1996). Most activity participation research has focussed on younger adults, therefore little is known about the beliefs *older adults* hold for active lifestyles. The general objective of this research was to examine an existing data set, in order to investigate why some seniors were active, while others were not. This entailed exploring in depth both motivation for, and intrinsic barriers to physical activity perceived by older adults.

Rationale for the Method

Since the aim of this research was to holistically uncover each individual's beliefs, attitudes and emotions toward physical activity participation in the context of their lives, the most effective means of inquiry was a qualitative approach. Inquiries that are based on humanistic concerns, such as this, are suited to qualitative methodologies which have the potential to yield rich data. In-depth interviewing is the most suitable data collection technique for this particular research. Through an established rapport and trust, it is possible to illicit a great deal of personal insight into each individual's experience. The present data were selected from a current interview data-base, which was collected for research with a similar objective.

This research will have an impact on the current knowledge base of the relationship between older adults and physical activity in a number of ways:

- A large qualitative data set will provide the opportunity to identify the main cognitive barriers to physical activity participation
- A number of motivational issues could be revealed in the dialogue of older people that will help community leaders develop more careful communication with older clients
- The data set may also help to strengthen our confidence in certain theoretical elements of physical activity motivation/adherence
- Could lead to a decreased demand for health care services by seniors, if we are more aware of how to motivate and activate this population.

Definitions of Terms

- *Senior* - an individual aged 60 years or older.

- *Physical activity* - any bodily movement produced by skeletal muscles that results in energy expenditure (Fitness Canada, 1994). According to this definition, physical activity encompasses leisure physical activity, exercise, sport, physical occupational work, and other physical chores.

- *Physically active individual* -an individual who takes part in active living (see definition of *active living*.

- *Physically inactive individual* - an individual who does not subscribe to active living (see *active living* definition).

- *Active living* - "a way of life in which physical activity is valued and integrated into daily life" (Fitness Canada, 1991, p.4).

Delimitations

This study was conducted using both purposeful and convenience sampling. The results of this study are based upon a larger data set collected from older adults, aged 60 and older, residing in the Edmonton region. The sample purposefully included both physically active and inactive men and women with various demographic backgrounds.

Limitations

Since the majority of the participants were recruited from Seniors' Societies and Spring Session for Seniors, the sample is probably not representative of all Edmonton seniors. This group probably represents independent-living, mobile, socially active and well-educated seniors.

CHAPTER 2
REVIEW OF LITERATURE

The Benefits of Lifelong Physical Activity

Individuals who have been chronically sedentary and those who have grown sedentary with increasing age have a high probability of becoming what gerontologists describe as the "frail elderly". The frail elderly are commonly characterised by loss of functional ability, or physical mobility, due to physiological decrements or the presence of disease. The personal effects associated with decreased functional ability often lead to a decreased quality of life, as a result of the changes in self-identity, limitations in self-actualisation, deteriorated mood states and loss of independence (Spirduso & Gilliam-MacRae, 1991).

Frailty results, in part, by the passage of time, or simply the aging process. Inevitably, the passage of time leads to death. The aging process, and thus frailty, however, can be accelerated by a number of factors, the most significant of which appears to be disuse. Scientific evidence that disuse accelerates the aging process and leads to certain disease susceptibility is abundant. Inactivity predisposes the body to hypertension, deterioration of neuromuscular system, bone loss, general muscular weakness and atrophy, muscle shortening, restriction of joint movement and susceptibility to many hypokinetic diseases such as coronary heart disease (Spirduso & Gilliam MacRae, 1991; Simonsick et.al., 1993; Blair, Kohl, Gordon & Paffenbarger, 1992; Blair et.al. 1989).

Amelioration of any or all of these symptoms would increase quality of life. Physical activity has been shown to make significant contributions to the prevention and reversal of most of these inactivity-induced ailments, which are far too prevalent in the elderly (Blair et.al., 1992; Blair et.al. 1989; Brill et.al., 1992). Furthermore, the benefits of physical activity also include some modifying effects on psychological well-being (Dishman, 1992; Hill, Storandt & Malley, 1993). Although we have no control over the passage of time , we

have almost total control over the extent to which we use our physical, mental and social capacities.

Physiological Benefits of Physical Activity

Although the precipitating factor of admission to an institution is often a medical or social crisis, in many of the elderly, the prime determinant is a deterioration or lack of functional ability (Shephard, 1990). While an improvement in functional ability is perhaps the strongest argument for encouraging physical activity in the very old, increased cardiovascular function and disease risk reduction or disease control are also important physiological benefits of physical activity.

Muscular strength, endurance, flexibility and mobility.

The severe disuse-related decline in muscular strength and endurance that are seen in the frail elderly can be a major delimiting factor in their quality of life. Muscular atrophy and weakness is frequently so debilitating that it precludes or substantially alters daily activities such as walking, stair climbing and carrying objects, or even lifting the body mass from a toilet seat. Furthermore, decreased muscular strength and endurance and lack of both flexibility and joint mobility have been associated with an increased risk of falling (Tobis, Friis & Reinsch, 1989; Holm & Kirchoff, 1984). Thus, the maintenance and improvement of these factors is extremely important, particularly in elderly adults.

It is well established that strength can be not only maintained, but also increased through resistive exercises in older adults (Fiatarone, et.al., 1990; Holm & Kirchof, 1984; Nichols, Omizo, Peterson & Nelson, 1993). Substantial improvements can be gained even with programs of minimal resistance and/or while participants are seated in chairs. Flexibility stretches, which enhance joint mobility can also be achieved with non-strenuous training (Holm & Kirchoff, 1984).

Cardiovascular function.

Aerobic power typically decreases with age and reduced levels of physical activity. A decreased aerobic power may lead to severe fatigue when carrying out the tasks of a normal day. The evidence that regular aerobic activity can bring about positive changes in many aspects of circulatory function is compelling. Changes in circulatory functions with exercise include increases in maximal oxygen consumption, decreased resting blood pressure and heart rate and improvements in blood lipid levels and glucose tolerance (Posner et.al., 1992; Blair et.al., 1992).

Disease risk reduction/rehabilitation.

Aside from the well-known effect of exercise on the prevention and rehabilitation of cardiovascular disease and diabetes mellitus (Blair et.al, 1989, Blair et.al. 1992, Brill, et.al., 1992; Despres, Tremblay, Nadaeu & Bouchard, 1988; Duncan, Gordon & Scott, 1991; Gordon, Scott, Wilkinson, Duncan & Blair, 1990; Simonsick et.al, 1993), there is increasing evidence that exercise is important in the prevention of osteoporosis (Fentem, 1994; Lane et.al. 1986; Snow-Harter & Marcus, 1991) and some types of cancer (Calabrese, 1990; Simon, 1990). The role of exercise in the treatment of arthritis remains unclear, but there is preliminary evidence that individuals with rheumatoid arthritis and osteoarthritis can benefit from regular systematic exercise (Spirduso & Gilliam-MacRae, 1991).

Psychological Benefits of Physical Activity

Exercise has long been proposed as a therapeutic modality to alleviate depression, stress and anxiety in young and middle-aged adults (Dishman, 1992) and the few investigators who studied older adults also found that exercise programs provide these positive psychological benefits (Hill, Storandt & Malley, 1993; Spirduso &Gilliam-MacRae 1991).

Physical Activity Patterns

Information on the activity patterns of Canadians indicates that the majority of older adults do not participate regularly in any kind of physical activity (Health and Welfare Canada, 1993). In fact, less than 10% of the population aged aver 65 years participate in supervised, scheduled and competitive activity (Stephens & Craig, 1990). The questions are posed then, why do so few of Canada's seniors participate in physical activity, and what is it that motivates those who do participate in a physically active lifestyle? While much physical activity motivation and adherence research has been documented, the large majority has focussed on younger adults. Information of this kind relating to older adults has begun to emerge, however, and will be presented alongside that of the younger population in the following section.

Physical Activity Motivation & Adherence in Younger Adults

Much research has been carried out from several different perspectives, however, a lack of a unifying conceptual framework has limited the utility of past research on physical activity participation and adherence. Many models have been applied to explain physically active behaviour - each model proposing constructs that may be important for a theory of exercise motivation, however, none of these models integrate these constructs into a parsimonious model (Dzewaltowski, 1989a).

Many theoretical approaches assume that behavioural choices are performed from rational decision making processes. Common to these theories is the assumption that goal-directed behaviour is a purposive action, rooted in cognitive activity. Each postulate cognitive mechanisms which influence self-regulation of behaviour, however these theories differ in the variables used to explain this process. Perhaps proved as the most useful framework to examine self-regulation of physically active behaviour is Social Cognitive Theory (SCT), proposed by Bandura (1986). SCT encompasses many aspects included in other exercise behaviour models, and as such, in addition to claiming the ability to explain a larger amount of the variance that any of the other models individually, it is also useful in the *prediction*

of behaviour. (Dzewaltowski, Noble & Shaw, 1990) .

SCT suggests that behaviour is influenced by a number of cognitive mechanisms operating in concert. There have been problems measuring the effects of these constructs on physically active behaviour, due to the confounding of these variables by researchers (Maddux 1995). However, when defined and measured carefully, and in a manner consistent with the conceptual definition, self-efficacy expectancy and outcome expectancy can each be important in the prediction of behaviour (Maddux, 1995).

Self-efficacy expectations have been found to be an important predictor of physically active behaviour. In fact, it has been established that an individual's beliefs of self-efficacy are central to their decisions to participate in physical activity (Bandura, 1995, 1989, 1986; Schwarzer & Fuchs, 1995). Self-efficacy can be thought of as situation-specific self-confidence, or more specifically, defined as "a person's judgements of their capability to organise and execute their skills and resources to perform an action that will lead to a designated outcome" (Bandura, 1986, p.391). More than simply an estimate of the skills one has, self efficacy concerns the "judgments of what one can do with whatever skills one possesses" (Bandura, 1986, p.391). People regulate their choice of behaviour and effort expenditure according to their beliefs of their capabilities (Bandura, 1995; Dzewaltowski, 1989; Maddux, 1995). For example, if an individual does not believe they have the capacity to perform a particular behaviour to achieve a certain outcome, it is highly likely that they will not persue, or possibly avoid the behaviour.

A positive perception of self-efficacy is proposed to effect behaviour in four ways, a) increased effort, b) persistence in the face of obstacles, or over lengthy periods of time, c) greater attention payed to tasks, and d) changes in strategies to solve problems (Rodgers & Brawley, 1996). However, the influence of self-efficacy is only observed when adequate incentives for behaviour are present (Rodgers & Brawley, 1986). These incentives are associated with outcomes expected as a consequence of behaviour. A large amount of

physical activity motivation or adherence research has viewed outcome expectations as a single-faceted construct - that is, "a judgement of the *likely* consequences a particular behaviour will produce (Dzewaltowski, 1989b). However, in terms of motivation cognition, it is also extremely important to look at outcome *value*.

There is no reason to expect that the assessment of the various outcomes should be predictive of health behaviour among people who do not value the outcomes, especially in the presence of more valued, competing outcomes (Rodgers & Brawley, 1996). It is possible that an individual may have sufficient self-efficacy to perform a behaviour and perceive a particular likley outcome for that behaviour, but if they do not *value* that particular outcome, they will not likely be motivated to perform the behaviour. For simplistic example, a person may feel that they possess the necessary skills and resources to walk to work, instead of driving, and believe that walking to work will likely allow him/her to be out in the sunshine, but if s/he does not *value* being in the sun, then there will most likely be no motivation to walk to work. This lack of motivation will be further reinforced when the behaviour of walking to work is competing against more valued outcomes, such as more time to sleep.

Exercise behaviour is somewhat unique in that the outcomes can be perceived as either positive or negative. For instance, the resulting feeling of physical exertion from exercising may be perceived by some as positive (thereby enhancing motivation for physical activity) and by others as negative (thereby undermining motivation for this behaviour). Rodgers and Brawley (1996) operationalised the concept of examining the outcome expectancy (*likelihood* of the outcome) in concert with the *value* of the outcome, terming this composite the *incentive*. The more positive the incentive value people attach to certain outcomes, the more effort they will expend if they judge themselves capable of obtaining them.

Within a younger population, it appears that self-efficacy, outcome likelihood and outcome value operate in concert to influence physically active behaviour. The limited research of this nature in on older adult cohort has hinted toward similar cognitive regulatory processes

for physically active behaviour and will be presented in the following section.

Physical Activity Motivation & Adherence in Older Adults

Previous research on older adult populations has identified a number of intrinsic barriers to and motivating factors for physical activity which relate to self-efficacy, outcome likelihood and outcome value. Furthermore, social reinforcement was also found to be a significantly associated factor with physically active behaviour in older adults.

One of the best predictors of exercise in late life for women has been identified as self-efficacy to participate in physical activity (Dzewaltowski, 1989a; O'Brien Cousins & Janzen in press for 1998; O'Brien Cousins, 1996; O'Brien Cousins & Keating, 1995), while a significant barrier to exercise has been perceived self-inefficacy, or the individual's belief that she is not sufficiently competent to take part in physical activity (O'Brien Cousins & Janzen, in press for 1998; O'Brien Cousins & Keating, 1995; O'Brien & Vertinsky, 1991).

Associations of physically active behaviour, relating to the perceived value of the expected likely outcomes of physically active behaviour were also identified in research on older adult populations. O'Brien and Vertinsky (1991) illustrated that many older women perceived that the exertion from even moderate activity would jeopardise their health, and thereby discouraged their participation. Conversely, other women who positively regarded the expected outcomes of physical activity, were in fact motivated to participate in regular physical activity. For example, the sense of achievement in challenging oneself physically, the belief of physical activity as an important life coping strategy, and the expectation of positive health and wellbeing outcomes were all cited as motivating outcomes for physically active behaviour (O'Brien Cousins & Janzen, in press for 1998; O'Brien Cousins and Keating, 1995; O'Brien & Vertinsky, 1991; O'Brien & Conger, 1991).

Another strong predictor of participation in physical activity relates to social reinforcement (O'Brien Cousins, 1996). O'Brien Cousins & Burgess, (1995) illustrated that social sanctions, or a lack of positive reinforcement for physical activity tended to stifle or prevent older women's participation in physical activity. Negative social reinforcement for older women to be physically active often stems from the prevalent and socially accepted *rocking chair* stereotype for this population (O'Brien & Vertinsky, 1991; Vertinsky, 1995), which posits that most socially acceptable, or expected behaviour of older adult, particularly women, is to sit back and live out the rest of their lives in safety and comfort, expending as little energy as possible. Behaviours that violate prevailing social norms elicit social censure, or other negative consequences, whereas behaviour that fulfils socially valued norms is approved and rewarded.

Furthermore, perceived social expectations that place women most in the responsibility for the care and management of the home and family have been cited as possible reasons for inactivity, due to feelings of guilt or selfishness for taking recreation time out for themselves (O'Brien & Vertinsky, 1991). O'Brien Cousins (1995) examined perceived sources of social support and found that having active friends and/or being encouraged by at least one person are the most influential forces in choosing active types of recreation.

Although some information is known about the motivating factors for and intrinsic barriers to physical activity in older womanhood, there is an obvious lack of data relating to men. As illustrated in the review of literature, this is a relatively new and largely unexplored area of study. Through exploration of the interview data, it is hoped that more clarity will be brought to this issue.

CHAPTER 3
METHODOLOGY

Introduction

The aim of the present research was to explore older adults' beliefs related to physical activity participation in an attempt to ascertain an explanation for why some seniors participate in regular physical activity, while others do not. This was effectively achieved through a strategic selection of the author's interviews within an existing qualitative data set. The strength of qualitative research lies in the richness of data which results from attention to the complexities of human experience (Fischer, 1994). These richly detailed data facilitate the deep understanding of human behaviour. This chapter outlines the research methodology employed to glean older adult beliefs about physical activity, including an overview of the data collection technique and procedures, and data analysis.

In-depth Interviews

In-depth interviewing is a data collecting technique used in qualitative research when the aim is to collect detailed, richly textured, person-centred information from one or more individuals. It is used when the researcher wants to investigate what is meaningful to the individual (Kauffman, 1994).

Instrumentation

The interview guide is a tool designed to explore and answer questions pertinent to the research topic or problem. The interview guide requires the researcher to define and articulate the research questions, thereby reducing the likelihood of straying from the inquiry question while conducting the interviews (Kauffman, 1994). As part of the research strategy for a large qualitative study on older adult motivation for exercise, two interview guides were developed: one customised to active older adults, and one customised to inactive older adults. The guide was used to initiate discussion about a topic, but not all questions were asked, nor answered systematically. These guides were used flexibly during each interview.

The exact wording of specific questions, the order in which they were asked and probes for greater detail were unique to each interview and depended on the present activity level and the nature of the informant's responses during that particular session. Subjects were allowed to present their views and alter the nature of the of the discussion topic as it suited them. The open-ended questions elicited subjective, individualised responses from each interviewee. (See Appendix A and B for Interview Guides).

Data Collection

Sampling.

The sample for the present research was drawn from a larger sample of data collected from the seniors community of Edmonton. For the larger sample, the two major Seniors Societies (Strathcona Place (southside), and the Society for the Retired and Semi-retired (northside)), were approached in order to obtain volunteers willing to be interviewed. The majority of the 47 informants (mean age of 71 years within an age range of 60-92 years) were participants in the University of Alberta Spring Session for Seniors program, who after being informed of the nature of the research volunteered to be interviewed.

In order to accept accountability for the present research, thirteen interviews conducted by the present researcher for the original research were selected as a sub-sample for the present investigation. This sub-sample included six males (three active and three inactive) and seven females (four active and three inactive). The mean age of the sub-sample was 70 years.

Due to the convenience style of sampling for some of the participants, the group may not necessarily be representative of all seniors in the Edmonton area. Most likely this group represents younger, healthier, independent living, mobile, socially active and well-educated seniors. However, the informant sample included representatives of various backgrounds and life experiences, in addition to various lifestyle patterns representing the spectrum of activity levels. Consequently, the material obtained is valid, richly detailed and insightful data that is reflective of some of the beliefs about active living held by older adults.

Procedure.

For the original investigation -

Data collection for the original study involved a team research approach. After a thorough briefing, each of the interviewers used the interview guide as a tool to assist with the collection of data. It was explained to each informant that the study was exploring the opinions older people hold toward their own health and well-being, and their values for physical activity. The interviewers made a concerted effort to build rapport and a trusting relationship with each of the informants in order to evoke full, honest and thoughtful answers to the questions posed. Once the activity level of each participant was established, the appropriate activity level-specific interview guide was utilised. The average duration of the interview session was approximately one hour (range of 30-90 minutes).

For the present research -

The objectives of the original study were similar to those of the present research, thereby making it possible to utilise the original sample for the present purpose. Thirteen interviews conducted by the present investigator were strategically selected from the above sample for representation of gender and activity level.

Ethical Considerations

Ethics approval for the larger study *"Toward a theory of older adult exercise motivation"* was obtained by the Review Committee of the Faculty of Physical Education and Recreation. Confidentiality and anonymity were maintained throughout the study. Participants names were not used in any way, and access to the data was restricted to the research team. Informed consent was obtained from the seniors at the beginning of the interview, by having them sign a consent form after the study was explained to them. They were informed of their right to ask any questions, refrain from answering any questions, turn off the recording equipment, or opt out of the study at any time. The tapes of the interviews were erased once the study was complete.

Data Analysis

The dialogue from the in-depth interviews was transcribed verbatim in order to analyse the data for information relating to the question of why some seniors are physically active while other are not. As the researcher became immersed in the context of the dialogue and in the dialogue itself, the analysis became driven by the emerging themes of the dialogue.

The most significant initial theme pertaining to the motivating factors for physical activity participation, and to a rationale for why some older adults are not physically active was a *goal* theme. A focus was taken on comparing what the participants wanted in life and how physical activity related to these life goals. This lead to the discovery of an *outcome expectation* theme. The investigation of the factors associated with perceived outcomes of physical activity lead to the emergence of a theme relating to *personal experience of physical activity*. As a consequence of these associations evidenced between the themes, a conceptual framework to explain the behaviour of this sample was developed. The researcher then individually examined each participant's case-study to check that this model accurately explained each individual's behaviour. A detailed explanation of this sample's physical activity behaviour is presented in the following section.

CHAPTER 4

RESULTS/DISCUSSION

Part 1 - Introduction of the participants

Following is a brief introduction of each of the 13 participants. Included within these biographies is an illustration of the individual's life experience and situational factors, and their resulting beliefs and attitudes toward physical activity. The active men and women will be introduced, followed by the inactive men and women.

Active Men

Mr Walker - Aged 61 Years

This participant, who walks briskly for at least one hour per day, is more physically active now than he was in his youth. In addition to his regular walking, he is an avid downhill and cross-country skier in the winter months, and enjoys backpacking in the warmer months.

A main catalyst for his increase in physical activity was a marriage break up, which left him with more free time. *"That's when I first got interested in aerobics classes. So I knew that regular physical activity programs were beneficial to my health. It became, initially a way of interacting with other people because I was living in a new city. Subsequently, further increases in physical activity evolved through that."*

When asked about his reasons for being active he states "*I'm driven. I'm driven!...I have a walking gene of some sort! That would explain it.*" It is clear, however, that he perceives health benefits from physical activity participation. *"I'm more alert and in better physical condition than most people my age... I want to maintain the walking as a way of life because I believe that it benefits at least my physical health... Physical activity can improve the quality of seniors lives, so it seems like you are living longer, rather than just existing longer."*

Mr Gymnast - Aged 74 Years

This participant has been a bachelor for the past ten years. He began gymnastics at the age of 57 after watching his son training in the sport. In addition to training for gymnastics four times per week, he also trains for figure skating four times per week. While he was physically active in his youth, his activity level decreased until he took up gymnastics and figure skating in his later adulthood.

He believes that physical activity keeps him in good shape and in good health. One of his main goals and a main motivating factor for him to continue to be active is to *"keep in physically good shape, because that enables you to get around and enjoy life."*

After triple-bypass heart surgery, he was eager to get back into physical activity because he felt that the activity would assist him with a rapid and full recovery. He also finds the challenges provided by his choice of activities satisfying. He enjoys a great deal of positive reinforcement from his family and friends, especially the group of older adults with whom he trains for gymnastics. *"These days in the team I belong to, we continue to encourage each other...I get encouragement from almost everybody I meet."*

His message to others is that of advocating the importance of *starting* physical activity. *"If they are 40 or 45 get busy and get active, get exercising, get in shape and look what can happen to you. You could quite likely be in as good physical shape as I am, and in as good health as I am at my age. I like to advertise that when I can. I get upset with people that let themselves get so far out of shape."*

Mr Rehab - Aged 75 Years

Physical activity has always been a part of this participant's lifestyle, beginning with his highly organised school sport program in England. His main incentives for physical activity were to feel better and to experience the personal satisfaction. When *Mr Rehab* was treated for an attack of angina he accepted an offer to be a participant in a cardiac research project.

Among the benefits of his regular swimming and walking were feelings of increases alertness and waking each morning in a very positive frame of mind. He is motivated to exercise by the desire to leave a substantial financial inheritance to each of his six children.

Active Women

Mrs Germany - Aged 64 Years

This participant immigrated from West Germany over 20 years ago. She brought with her characteristics of what she calls the traditional physically active European lifestyle. Therefore, physical activity has always been integrated into her lifestyle, (initially as a function of necessity) and she also has a focus on healthy living. She feels that health is a function of the lifestyle that one acquires. She makes a concerted effort to walk everyday (with a group of friends, or on her own). Her main motive for walking is so that she will remain healthy, which will enable her to remain active.

Continuous positive social reinforcement is provided to her by family and friends. She believes that being physically active will help her achieve her goal of continued good health. After a lifetime of working two jobs (18 hour days) as a widow to support her family, she feels that in her retirement she would like to "*take it a little easy...but I still cannot just sit at home and do nothing. I have to keep busy...If I sat in the rocking chair I would die!*"

Ms Speed Skater - Aged 64 Years

This participant has been physically active throughout her whole life, ranging from recreational to elite level participation . She represented Canada in two Olympic games in speed skating.

Despite unexpectedly being diagnosed with breast cancer and undergoing a mastectomy just months prior to the interview, she still maintains her belief in the health benefits of physical activity. She takes for granted the physical benefits of physical activity and at this point, while more salient to her are the psychological benefits. *"It helps me relieve a lot of stuff that's gathering up in side of me, you know. So it helps that way as a release"*

At this point in time, her most important strategy for her wellbeing at this point in time is getting back into a physical activity program. *"I'm going to keep up my swimming and exercise and the whole bit. Keep my joint oiled up! Because I firmly believe in what you don't use, you lose."*

Despite her diagnosis with cancer, she still believes in the total wellbeing benefits of physical activity. She attributes the cancer to other factors within her, such as emotional occurrences throughout her life.

Mrs Self-concept - Aged 76 Years

This participant has been physically active throughout her whole life. Despite not being as active now as she was in her youth, her activities include walking each day, doing her own shopping and housework and remaining involved in community activities. *"I don't really have a program every day, but every day I make a point of walking up and down the stairs, whether at home or out in the community. I'm out every day pretty much. I park my car downtown and walk. I guess within my capabilities, I try to keep myself fit."*

She believes that maintaining her physical activity participation, along with following a regime of a good diet, and socialisation will help her remain healthy. Besides feeling responsible to her family and to the community to remain healthy, she has learned to enjoy her current lifestyle and believes that she would feel deprived if she were to lose her health. "*You have a better chance to enjoy life...You're free to drive if you want to go anywhere, and it means that you don't have to consider whether you are fit enough to be able to go on international travel, so it opens up...well it's important because it gives you access to a lot of things that otherwise you wouldn't have.*"

She feels that physical activity participation is an important aspect of maintaining personal wellbeing and that participation is tied in with an individual's self concept. "*I guess that [physical activity involvement] is tied in with your concept of how you see yourself. If you feel yourself of some value, then life is worth living, and living well.*"

Mrs Liberated Widow - Aged 61 Years

In addition to regularly walking and carrying out household chores, this participant skates four or five times per week. She was, however, not always physically active, only becoming so after being widowed 16 years ago. "*I was the stay-at-home housewife. Very much a doormat, and very much under my husband's thumb. But all of a sudden, I didn't have anyone saying, 'You shouldn't be doing this', or 'Why would you want to do that?', or 'You're too old for that.' So I just started going.*"

In addition to having read about the health benefits, her motivation for continuing with physical activity is feeling and looking better. "*I come from a very long-lived family and I think that if I am going to live to be eighty or ninety, I better do it in good health.*" Her goal is to be able to keep moving, so she can maintain her quality of life for as long as possible.

Inactive Men

Mr Rail Worker - Aged 69 Years

This participant grew up on a farm and was very active in his early years. In his retirement, however, he felt that he does enough, with his household chores of cooking and vacuuming. "*...when I was riding up and down the fields on the tractor, after half a day my shoulders ached, my elbows ached and so on...and I said to myself 'I wonder why you're doing this? You don't have to be.'*" One of his main goals was to stay healthy, and saw good nutrition and non-smoking as a means to achieve this. He also believes that in order to maintain good health it is important to remain active, however he is referring to remaining *socially* active, rather than *physically* active. He sees his retirement as a time to "*do the things that I like to do*".

Mr Unconvinced - Aged 75 Years

Physical activity has never been a part of this participant's life. "*I somehow didn't come from a tradition where exercise was considered a part of living...I'm not the sort of person who goes out walking for exercise. I look for short-cuts. If there's an escalator, I will take it. If there is an elevator, I will take it.*" Although his doctor has repeatedly suggested that he incorporate physical activity into his lifestyle, he does not perceive the need. "*I have survived. I'm over 75, so I wonder whether changing my habits would improve the situation..I guess that I must not be convinced that exercise is what I need for my health.*"

Mr Not Useful - Aged 79 Years

"*I might sneeze three or four times a day...That's my physical activity!*" *Mr Not Useful* has never been involved in physical activity. He felt he never had time during his working life as Professor of engineering. He had recently been experiencing a number of health problems, amelioration for which his physicians had periodically been encouraging physical activity participation. He perceives "*no negative side to being physically active - except that you're not doing something useful.*"

Inactive Women

Mrs Lazy - Aged 73 Years

This participant sees no reason for her physically inactive lifestyle other than *"pure laziness"*, or "*liking to put the seat of the pants to the seat of the chair*". Despite perceiving positive health outcomes from physical activity participation, she says the benefits are not great enough "*to entice her to do it*". Although she feels that physical activity could help her attain her goal of continued good health, she attributes her current good health mainly to genetics.

Mrs Wanna Walk - Aged 65 Years

Physical activity has never been a part of this participant's lifestyle and while she mentioned that she would like to incorporate physical activity into her lifestyle, her interest dwindles very quickly. While she realises her high genetic susceptibility to health problems, she feels that physical activity is a moderately important aspect of maintaining her health and wellbeing, however diet and rest are considered the most important dimensions.

Mrs Serving Others - Aged 69 Years

"*I don't do very much...I am supposed to be doing a regime of exercise because of the severe heart attack that I had ...I am a person who serves, and ...I don't think that I would feel very satisfied if I just did a regime of exercise for myself.*" In addition to feeling selfish or self-serving, other disincentives to be physically active are her outcome expectations of the activity itself. Physical activity has never been a part of her lifestyle, "*It's not where I have been, and this dog is not learning new tricks!*" This participant is very socially active, and sees that as the most important aspect to her life satisfaction. "*I want to keep on living at the rate that I am living now, until I die. I want to die with my boots on.*"

Part 2 - Presentation and Discussion of the Findings

As mentioned in the previous chapter, the dialogue from this data set directed the development of a model to explain the physically active behaviour of the present sample. This model, presented in Figure 1, will be discussed in detail, followed by a presentation of more specific findings relating to social support for physical activity. Furthermore, possible gender differences illustrated in the dialogue from these seniors will be discussed. A summary of the results and implications for both practice and future research will also be presented.

In this sample, each individual had life goals relating to the maintenance of their personal health and well-being. It appeared that physically active behaviour was associated with each individual's beliefs about the expected outcomes of physical activity in relation to their life goals. For example, the active seniors were those who perceived likely positive health outcomes of physically active behaviour, whereas the inactive seniors were those who did not perceive positive health outcomes to result from physical activity.

It appeared that the associated factor for the perceived likelihood of positive health/well-being outcomes of physical activity was personal experience of physical activity. The active seniors (who perceived likely positive health outcomes of physical activity) demonstrated that they had personally experienced positive outcomes from physical activity. The inactive seniors (who did not perceive that positive health outcomes from physical activity were likely), demonstrated that they had not previously experienced positive outcomes from physical activity participation.

Both, a *lack of exposure* to physical activity and *negative experience* of physical activity were associated with the perceived deprivation of the experience of positive physical activity outcomes. Four main factors cited as rationales for the scant or negative experience of physical activity were, a perceived lack of self efficacy for physical activity, a perceived

deficiency of positive social reinforcement for physical activity, the experience of physical activity as labour (rather than leisure) and an activity-incongruent personal identity.

The construct of self-concept appeared to be an integral part of the cognitive mechanisms relating to physical activity, however, it was only evidenced in the dialogue from one of the participants. The level of association of self-concept with physical activity in this case was highest on the model, for example, this individual *did* expect positive health/well-being outcomes of physical activity and had experienced a lifetime of physical activity, however, a life event which lead to a decreased self-concept, also lead to the cessation of physical activity. Each of the above points will be discussed in greater depth in the following section.

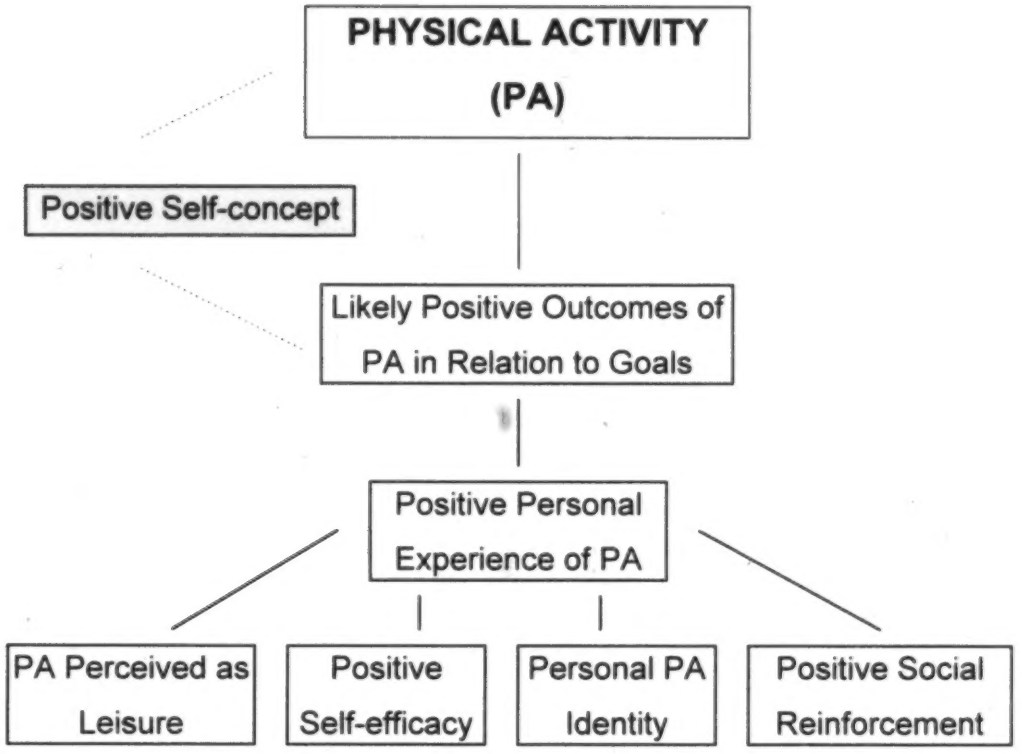

Figure 1 - Model of Older Adult Physical Activity Participation.

Physical Activity Participation

In this sample, it appeared that physically active behaviour was associated with each individual's beliefs about the expected outcomes of physical activity in relation to their life goals. Each of the active and inactive participants had life goals relating to the maintenance of health and wellbeing, such as, to "*maintain my quality of life for as long as possible*" or "*to continue with my good health*". Furthermore, *Mrs Liberated Widow* stated, "*I come from a very long-lived family and I think that if I am going to live to be eighty or ninety, I had better do it in good health.*" The associated factor for physical activity participation was the perceived likelihood of a positive outcome of physical activity in relation to their goal of maintained health and well-being.

Perceived Likelihood of Positive Outcomes

The belief that health/wellbeing maintaining outcomes of physical activity were *definite outcomes* of physical activity appeared to be a key factor associated with physical activity participation. That is, the active seniors tended to believe that physical activity was very likely to result in positive health and wellbeing outcomes, whereas the inactive seniors illustrated that they did not believe that physical activity was likely to result in positive health and well-being outcomes. This perceived likelihood of positive health outcomes is clearly demonstrated in the following comments by the active seniors. *Mrs Germany* stated, "*Yes, yes. I do it [physical activity] to keep healthy. That's the reason I really do it.*"

Mr Gymnast believed,

> *Well, the benefits, there is no question about it - [physical activity] keeps me in good health....I feel that physical activity can improve the quality of seniors' lives, so it seems you are living longer, rather than just existing longer.*"

Mr Walker stated,

> *I want to maintain walking as a way of life because I believe that in the long term it benefits at least my physical health.*

Furthermore, *Mrs Self-concept* explained that physical activity...

> *keeps you in good health, so you have a better chance to enjoy life...it means that you don't have to consider whether you are fit enough to go on international travel, so it opens up...well, it's important because it gives you access to a lot of things that otherwise you wouldn't have.*

A further example of the perceived positive health outcomes of physical activity came from *Ms Speed Skater,* who stated,

> *The biggest strategy for me is getting back into an activity program. A physical one to continue with the mental health. Getting through this chemotherapy and radiation is going to be another eight months. So it's a long haul, and getting through that without losing my hair and my sanity!...The activity though, I think is important.*

Conversely, the strength of her conviction of the positive health outcomes of physical activity is highlighted by *Mrs Germany*'s expected outcome of physical inactivity, who claimed, *"If I sat in the rocking chair, I would die!"*

It is clear from the above comments that the active seniors tended to believe that physical activity would undoubtedly result in positive health and well-being outcomes. Conversely, however, many of the inactive seniors did *not* believe that positive health outcomes were likely of physical activity. The belief that positive health and well-being outcomes of physical activity were *not at all* likely, or *not very* likely outcomes of physical activity participation appeared to be the key factors associated with physical *inactivity*.

Positive health outcomes of physical activity not at all likely.

A number of the inactive seniors explicitly indicated their view that positive health outcomes of physical activity were not at all likely. For one of the gentlemen, this belief in a non-relationship between physical activity outcomes and health was a manifestation of an external locus of health control.

> *Well, ...health control...no I don't think that's under any special control...It's not under my control! I'm taking all these bloody pills and one thing and another!...*

That is, he believed, regardless of his behaviour, (physical activity or otherwise), he was not able to personally assert any kind of control over his health.

While an external locus of health control was associated with *Mr Not Useful's* perception of a non-relationship between physical activity and health, the remaining inactive seniors did, in fact, believe that personal health and wellbeing can be influenced by an individual's behaviour. This collective belief in an internal locus of health control is clearly illustrated in a comment from *Mr Railworker*.

> *Oh, I think there's a great deal of [health] within a person's own control. Ah...you've got to try to take care of your system. You can't let it go...*

However, while they believed that a degree of control can be asserted over health via personal behaviour, it is obvious that these three participants did not consider physical activity participation as one of those controlling or influencing behaviours. They did not believe that the outcomes of physical activity were at all associated with maintained health and well-being. For example, when asked about his belief regarding a link between health and the outcomes of physical activity, *Mr Unconvinced* responded,

> *In my constellation of thinking, I don't ...I don't consider exercise ...I don't put exercise in the category of healthy living. I'm not quite convinced that ...I don't know. I'm not convinced that exercise is needed. I feel that I am fine the way I am.... I get check-ups every so often at the family clinic, and he*

> *says, 'well you look okay but I think you should exercise'. So I take his advice under consideration. But the stairs are still there...I live on the twenty first floor and I have never taken the stairs yet.... I'm not the sort of person who goes walking for exercise. I look for short cuts. If there's an escalator I will take it. If there is an elevator I will take it.... So I guess that I must not be convinced that exercise is what I need for my health.... So I guess the short answer is that I don't see exercise as a necessity, the way water and food is.... I've survived. I'm over 75, so I wonder whether changing my habits would really improve the situation.*

While these inactive seniors believed that health can be influenced by one's behaviour, it was clear that these seniors did not consider the outcomes of *physical activity* to benefit the maintenance of their health and well-being.

Positive health outcomes of physical activity only somewhat likely.

While the above inactive seniors believed that the outcomes of physical activity would by no means positively influence their health, two inactive seniors did, in fact, believe that positive health outcomes of physical activity were *somewhat likely*. For example, *Mrs* Lazy commented,

> *Oh, I'm sure that I would feel better - I mean not that I have any illness or anything - but I would probably have more stamina and so on if I did do more physical activity.*

Furthermore, *Mrs Wanna Walk* stated,

> *I have always been healthy and have expected to live a long time. [The wellbeing of myself and my family is] on my mind a lot now because of what has happened to my family...We have heart trouble in the family, and circulation problems...my father and two brothers have heart problems and there are other people in the family that seem to have problems....[But the*

> *benefit of participating in physical activity is that of] preventing health problems.*

However, sedentary behaviour prevailed, despite this belief in positive health outcomes of physical activity. *Mrs Wanna Walk* mentioned that although she had a family history of heart disease and she believed that physical activity would help to combat those problems, she was still *"not [motivated] enough to get on a program and really stick with it...I just don't have the drive to do it."* Sedentary behaviour prevailed, despite the manifesting feelings of health vulnerability stemming directly from their sedentary behaviour.

Even in this case of perceived danger, of which physical activity is believed a precaution, no action was taken. In the case of the *active* participants, this situation tended to lead to activity participation. This observation poses a crucial question - Why then, did these individuals remain physically inactive despite the strong manifesting beliefs of health risk? Why did this situation not bestir these individuals to become physically active?

The present results revealed two major associations with these individuals' prevailing physical inactivity. One association being that they perceived more significant sources than physical activity of positive health outcomes, and the second association being the belief in more likely *negative* outcomes of physical activity.

More Significant Sources of Positive Health Outcomes

While considered a source of somewhat potential positive effects on health, physical activity was seen as only *part* of the equation. These individuals believed there are other, *more significant* health-influencing behaviours. This point is demonstrated by *Mrs Wanna Walk's* response to a question about the importance of physical activity to her as a means of maintaining or improving her health.

> *Not uppermost. I know that I should do it because of preventing health problems... But I just don't have the drive to do it... I think that just the*

changes that we've made [have been] beneficial, like eating habits and so on. Making sure you get enough rest at night. Those things are good...and I sing in a chorus. I visit the grandchildren and talk to them. So by doing those things, you have a certain amount of control over your physical health.

Other perceived sources of likely positive health outcomes were cited by the inactive seniors. Stress control and diet appeared to be commonly perceived behavioural sources of health benefits. Other behaviours mentioned were non-smoking, controlling one's temper and being *socially* active.

Mr Unconvinced stated,

I realise that, I guess in terms of health, that I should be having vitamin C. So I have vitamin C pills that I take....So I'm conscious to the extent that I need some extra vitamins, and C and D are the ones that I have chosen.... [I've learned about vitamins] by training. I'm in biology, and epidemiology, and I was a prof. in epidemiology at a university medical school, so I know about diets and their importance.

Furthermore, *Mr Railworker* commented,

Probably having healthy eating habits is one thing, and ah...probably the other things are...the smoking habit. And I...haven't accomplished the healthy eating habits yet, but I quit smoking so...! I got half of that done! Of course,...that's another thing, ah...modern medical science has done wonders to...ah..it can help you. The diseases that my parents had, and grandparents, I suppose,...ah...those are all under control today. These things, I guess, make people live longer too.... I attribute some of the way I feel, and whatnot...to the cold weather... And...the other part of the healthy condition, I think is...part of the diet...And ah...one of the things is, I still have all my own teeth. There's not many people 69 years old can say that. And I think

that was part of what my mother prepared. We always ate raw carrots and raw turnips...

But other than that, as far as the topic of the things you have to do to keep healthy,...I don't think there's much more...other than, you must control...ah...if you ever had a temper, it must be controlled.

One other thing if you are going to carry on and be healthy...I think you've got to be active alright. We were going to do Meals On Wheels, until we were posted for this [coordinators of a Projects Committee]. I think one of the secrets of staying...having your wellbeing, anyhow, is ah...you got to be active. You can't just, as they say, 'go through the paces', - go to work and come home, go to work and come home. You've got to have something else to do and ah...which I did all my life...I never want to go back to it. I'm probably one of the few people to be dumb enough to be elected president of my community league twice. Once is enough for anybody! I ah, was chairman of the Edmonton Sports Council...and that took a lot of time...that was an experience. Ah, for a little over 20 years.

It is important to note that although *Mr Railworker* mentioned *keeping active* as a source of positive health outcomes, he was referring to being *socially active*, rather than *physically active*.

More Likely Negative Outcomes of Physical Activity

The second association with inactivity is that of the more salient expectation of negative outcomes of physical activity. Not only did many inactive seniors fail to see the positive health outcomes of physical activity, they in fact expected likely *negative outcomes* of physical activity. These expected negative outcomes included feelings of selfishness, that physical activity would interfere with their lives and that physical activity would in fact,

potentiate, or exacerbate health problems. These expected negative outcomes evidence a source of *demotivation* for physical activity participation.

Feeling selfish.

Physical activity was expected by some of the inactive seniors to manifest feelings of selfishness. For example, *Mrs Serving Others* illustrated that a deterrent to physical activity was her belief that,

> *... mentally I don't think [I would benefit from participating in more physical activity]. I am a person who serves, and I would feel very,...I don't think that I would feel very satisfied if I just did a regime of exercise for myself.*

Interfering with other goals.

The expectation of physical activity interfering with life goals was an explanation for inactivity offered by some inactive seniors, such as,

> *I don't think [anything would motivate me to be more physically active]. Because I want to help other people. I have assessed this considerably. And I want to spend more time helping other people and in the organisations that I work with. [Helping others] gives me more satisfaction, and I get a lot more out of it [than physical activity]...* "

Additionally *Mr Unconvinced* described his (non-motivation) for an active lifestyle as,

> *I see [physical activity] as interfering [with my goals]. Like for example, I could play [ping-pong] three times a week. I resist attempts at doing that...because it takes up too much of my time.... If I do it three times a week it becomes an occupation...[it's] fun, but it doesn't help me with the other goals that I am pursuing.*

Exacerbating health problems.

Further perpetuating the demotivation for physical activity is the belief that physical activity is a potential catalyst of a *decrease* in personal wellbeing. Rather than perceived as a source of positive health outcomes, the act of negotiating stairs was, in fact, considered by *Mr Railworker* to cause problems for the wellbeing of himself and his wife. It did not occur to him that the activity may, in fact, alleviate the arthritic condition and increase future quality of life.

> *Every once in a while, if somebody's coming, then you have to go upstairs and vacuum and whatnot. And that's about the only time I go upstairs! This is one of the things that we are going to have to do. We're going to have to move to a place all on one floor and so on...you know, the washer and drier is in the basement...and you're up and down the stairs...If you had everything on the one floor, then you wouldn't have to go upstairs and downstairs. Even the entry of the front and back door should be level, so you don't have to go upstairs.... [We are not finding it a problem now] but we are eventually going to. My wife has arthritis in her shoulders and in her hips... And that's one of the reasons we've got to get a ground floor.*

As illustrated above, the active seniors tended to expect likely positive outcomes of physical activity, whereas the inactive seniors did not. It appeared that the associated factor for the perceived likelihood of positive health/well-being outcomes of physical activity was personal experience of physical activity. The late life active seniors demonstrated that they had at some point in the course of their lives, personally experienced positive outcomes of physical activity, while the late-life inactive seniors had *not* personally experienced positive outcomes of physical activity.

Personal Experience of the Positive Health Outcomes

Each of the late-life active seniors mentioned their personal experience of the positive health outcomes of physical activity. These positive health outcomes included, physical and psychological benefits.

Physical benefits.

The benefits of weight control and physical fitness, which lead to a general feeling of looking and feeling better appeared to be a universal belief across the scope of active participants. *Mrs Germany* felt that *"being active keeps you young."*

Additionally, physical activity was attributed with providing physical therapeutic benefits. *Mr Gymnast* believed physical activity helped him recover after complicated heart surgery.

> *...so I was in very bad shape when I came out. There was nothing left of me but skin and bones. I finally got back into [physical activity], slowly, slowly, slowly and now I'm built right back up to where I was before, and I'm in good physical shape.*

In addition, *Ms Speed Skater* credited physical activity with assisting greatly with her recovery from surgery.

> *I was working to maintain my body. I find it kind of scary when I see some of my friends, or an older sister that goes out walking and their joints don't function. They need oil!... I know if you don't use it, you lose it.*

Psychological benefits.

In regard to a physically active lifestyle, the active participants perceived the psychological benefits to relate to cognitive function and emotional health. The majority of the active participants attributed increased alertness to active living. When asked if she felt that physical activity has a role in improving mental wellbeing, *Mrs Liberated Widow* responded,

> *Oh definitely. Oh, it keeps you more alert. It feeds oxygen into your brain,*

so it's got to help.

Further, *Mr Rehab* stated,

> *When you are active in your body, your brain is active as well. The air and all this extra breathing flushes the system out and clears your mind.*

Most of the active participants cited enjoyment and personal satisfaction as immediate benefits of physical activity participation. *Mr Gymnast* mentioned that a benefit of physical activity was a sense of achievement and self-fulfilment from continuing to learn new things.

Ms Speed Skater felt that physical activity helped improve her emotional health in her time of illness.

> *I kind of take [the physical benefits] for granted now. At this point in time [the physical activity] helps me to relieve a lot of the stuff that's gathering up inside me, you know. So it helps that way as a release.*

Mr Rehab believed that physical activity participation leads to a longer-term emotional benefit.

> *I wake up positive. In fact, my sons have never seen me miserable...My wife says to my sons, 'You should look at Dad - we've been married 28 years now and I've never seen him yet when he hasn't looked positive in the morning'.*

While it is clear that the active seniors experienced broad and highly valued health outcomes of physical activity, the late-life inactive seniors demonstrated that they had *not* experienced positive outcomes of physical activity. In fact, the closest indication of positive outcomes were vague and inarticulately described *expectations* of somewhat possible positive outcomes - not actual experiences. For example, *Mrs Lazy* perceived a somewhat possible benefit of regular physical activity to be that of,

> *Oh, well it would increase muscle tone. You know it would generally, you*

know, ...add to my...breathing capacity. Uh,...it would be good for me! But not good enough that it will, shall I say,...entice me to do it.

While *Mr Not Useful* perceived a possible benefit to be,

Well, because it's good for you and general purpose from what I can see. If you're at our age, your lungs and your muscles...and get a little blood flowing though your system and ah...

Clearly, these vaguely perceived potential health benefits described of physical activity were not well-understood and had not been personally experienced. In fact, these expected outcomes were mostly a result of reading or word-of-mouth accounts of the benefits of physical activity. For example, *Mrs Wanna Walk* stated,

[I gained my knowledge about the benefits of physical activity from], well, just everywhere. Mostly by word of mouth. In the media, everybody's talking about it. It's in the news, in the papers, in magazines, on the radio, it's on television. Over the years it's been brought up and you can't really help but know. And over the years you start to see people who have become more active and not just sitting around all the time, and they are in better health.

To reiterate the findings up to this point, the inactive seniors had not personally experienced positive outcomes of physical activity and did not perceive positive health and well-being outcomes of physical activity. Thus, another question is posed. Why then, have these physically inactive individuals not experienced benefits of physical activity? A number of explanations for this point are very evident in the dialogue from the inactive individuals. These explanations include a *lack of* exposure to physical activity, or *negative* experience of physical activity throughout their lives, leading to future avoidance of physical activity.

Lack of Exposure to Physical Activity

Many of the *active* participants mentioned participation in physical activity from childhood. However, it appears that most of the inactive participants did not experience a great deal of exposure to physical activity throughout their lives. Two associated factors which are cited as rationales for this include, a lack of athletic identity and a lack of social reinforcement for physically active behaviour.

Lack of physically active personal identity.

That physical activity was not a part of one's personal identity was partial explanation one senior cited for her current physically inactive lifestyle.

> *I guess that we are just not into activity as a family. We're more of a music thing. You know, that type of thing rather than sports and physical activities. I've never been active in sports, but I have a son who is very active in sports and loves it, but the rest of us, we prefer a bit of music.*

Lack of social reinforcement.

Another rationale for a lack of exposure to physical activity is a perceived lack of proximal social reinforcement for physically active behaviour. *Mrs Wanna Walk* mentioned,

> *I seem to lose interest [in physical activity]. Perhaps if there was a group that I could go walking with...I don't like walking around malls. That I don't like and I don't find interesting. I just didn't seem interested in that...I think [walking with a group would help to motivate me]. In fact, I just haven't found a group.*

Further to this point, she mentioned the importance of a group physical activity program to her husband.

> *My husband is on a program but he goes to a cardiac institute and is on a program three times a week. When he first started, I don't think he would have kept it up, but there are other people there, and they have a real good*

spirited group and they are all facing the same problems, they have all got these heart problems. And by having this controlled program it keeps them going and it really pulled him through, because of course he lost his job and everything. If he hadn't had this to go to three times a week, and the other people to keep in contact with I think he would have let it go too.

Consequently, these comments suggest the potential importance of social reinforcement to the initiation of and/or adherence to physically active behaviour.

Negative Experience of Physical Activity

While the majority of the inactive seniors in this sample had experienced some degree of physical activity throughout their lives, it was not apparent that any of these seniors believed they had personally experienced any benefits from their physical activity participation. In fact, many expressed some experience of negative outcomes relating to their personal physically active behaviour, which in turn, lead to the development of a negative attitude toward, and subsequent avoidance of physical activity. The negative outcomes experienced of physical activity in the present sample pertained to the type of physical activity and the perception of a lack of self-efficacy for physical activity.

Experience of physical activity as work.

Mr Railworker articulated an excellent rationale for his current inactive lifestyle. His experience of physical activity had been such that physical activity represented hard labour, and as such, the experienced outcomes were pain and discomfort. As a consequence of these experienced negative outcomes, physical activity was certainly not perceived by *Mr Railworker* as an activity beneficial to his health, or a pursuit that he wished to continue in his retirement.

I worked the greater part [35 years] of my working life on the railway and I also farmed. I even farmed long after I retired...One of the reasons I sold the farm was because when I was riding up and down the fields on the tractor, after half a day my shoulders ached, my elbows ached and so

on...and I said to myself, 'I wonder why you are doing this. You don't have to be.'

Lack of self-efficacy for physical activity.

Lack of confidence for performing specific physical activities, or the feeling of incompetence at particular physical activities lead to negative outcomes, such as lack of enjoyment, and in some cases, embarrassment and humiliation. This perceived lack of self-efficacy and subsequent negative outcome expectations lead the majority of seniors to avoid all forms of physical activity participation. *Mr Not Useful* explained that his lack of physical activity participation was,

Just [because of] the fact that I'm not very good at it... I think the first thing you think of is competitive sport and I was never very good at that...No coordination! I think that must have been it.

Similarly, *Mrs Serving Others* stated,

I have backed off [from physical activity] most of my life. I was never very good at sports. I had polio and my balance was never very good.

Perhaps the most telling example of a lack of self-efficacy leading to physical inactivity since childhood is presented by *Mrs Lazy.*

Well...as far as athletic ability - I don't have any!! I don't have any!...Um.... but as far as other athletic ability, I mean could I hit a ball? No. I was always the score keeper! Could I ever play badminton? Could I ever play basketball? No. No, no. I don't have much eye-hand coordination....I would never voluntarily participate in anything other than skating or swimming. You know, where nobody was going to expect you to be a part of the team and you were always the one that missed the ball! You know!

I didn't want to [be involved in activity]...I just wanted them to just quietly leave me alone! And you know how....ah...Psych 101 tells you all about the impact of early years, well you can use this as a marvellous example. I had three girl cousins, who were all - I suppose one would term them extremely athletic. You know they were the ones who were always on the high school basketball teams, and they were members of the so-called 'exclusive' sports club and so on. I came along two years later than the last one and you know, and here's this lovely gym teacher, who I suppose I've never forgiven, saying to me 'And what's the matter with you?' You know! This was 60 years ago, or longer ago than that!...In those days in a gym class, you were lined up by height. So I was always the first one that had to attempt to attempt doing things like a somersault, or high jump, and I don't think this added to my self-image one little bit, because, you know, I convinced myself I couldn't do it and therefore I couldn't...

...You know, this is one thing why I've always tried to be understanding, we all avoid the things we do badly. You know, we all avoid the things we do badly, and if a kid doesn't do his math test or his math assignment, it's because he can't do it. You know.

When asked if she perceived a negative side to being physically active, *Mr Lazy* replied,

Ah... certainly emotionally, because as I say, I'm not athletically inclined. I mean if somebody is going to get up a ball game or something, that's not for me! I'm going to sit on the sidelines and cheer.

When asked how she deals with this negative emotional aspect of physical activity, *Mrs Lazy* responded,

"Avoidance. Avoidance! Absolutely!"

Avoidance of physical activity was a consequence of perceived lack of self-efficacy for physical activity in all cases. An indication of the potency of a lack of physical activity self-efficacy is the fact that each of these individuals described the beginning of their perception at some point in their childhood, however their avoidance behaviour continued into adulthood. Evidence was presented that this profound effect was perpetuated in the individuals' later years as an effect of the resulting belief that,

It's not where I have been, and this dog is not learning new tricks.

To revisit the model presented, physically active behaviour was associated with the belief that physical activity resulted in positive health and well-being outcomes. The seniors who did not perceive important positive health and wellbeing outcomes of physical activity were physically inactive. These inactive seniors had, in fact, not personally experienced the positive outcomes of physical activity. A number of factors emerged from the dialogue which related to a lack of personal experience of the positive outcomes of physical activity. One of these factors included a lack of exposure to physical activity, the other included prior negative experience of physical activity.

As presented in the model, however, another factor relating to physically active behaviour emerged from the dialogue. This construct of self-concept appeared to be an integral part of the belief systems relating to physically active behaviour, however, it was only evidenced in dialogue from one of the participants. For example, one individual who *did* expect positive health and well-being outcomes of physical activity and *had* experienced a lifetime of physical activity, (associations after which physical activity usually followed), became physically inactive after experiencing a life event which lead to a decreased self-concept. The following section will describe the series of events and the role of self-concept, leading to this individual's period of inactivity.

Self-concept

One of the female participants had been habitually active throughout her entire life; her activity participation ranging from an elite to a recreational level. Retirement became a significant turning point in her life, in which she became physically *inactive*.

> *Well, then I quit work, and I quit everything. Everything! And so I just didn't seem to be able to do the things that were good for me. I mean I would go out for a walk the odd time, but nothing really vigorous that I knew would do me the most good, and I felt really uncomfortable about that. But it was my mental state then... I even started eating things that I wouldn't eat previously, you know!*

While she was enduring this period, she perceived many unhealthy aspects however continued on that path. When asked if she could explain this atypical behaviour, she responded,

> *Well, that gets into the psychological aspect. I guess a big part of it was that I had always received feedback. I based my self-concept, myself, on feedback from other people. It wasn't internal and I had always accomplished, so I always got this [feedback]. Then all of a sudden I cut myself off from work and everything, so I wasn't getting any feedback, any accolades. My self-concept was based on other people's perception of me, so I had a problem.*

> *It's been certainly quite a merry-go-round, you know. And I think when you live your life on a merry-go-round, everything's fine as long as you keep going around, but then you jump off and then...bingo! Oh yeah, [that's how I see my retirement]. I jumped off the merry-go-round and even though I had all these things planned - like I had done all this mind mapping and prioritising of what I thought was what I wanted to do when I retired. I planned all the right things, but I didn't do any of them. I couldn't. I could not! I couldn't get over the hurdle of my mind, you know, of what was*

happening to me [the lack of feedback and accolades from others].

The sudden absence of positive feedback and accolades that she had become dependant on, lead to her decreased self-esteem. She felt that she was not worthy of doing the things she considered good for her. Consequently, she neglected her life-long physical activity participation, thereby depriving herself of the physical and psychological benefits. During this period of inactivity, she experienced substantial mental turmoil. She strongly believed that her physical inactivity was jeopardising her valued total wellbeing, however,

> *...my mind wouldn't allow me to do it lots of times. To work out. Because I couldn't get over that hurdle of doing it because it's good for me - because I wasn't worthy of doing things that were good for me, sort of thing. Very convoluted!*

This example, however, illustrated the transient nature of the effect self-concept had on physical activity participation. While it took a diagnosis of a life-threatening illness to initiate the redevelopment of a positive self-concept, the result of this work was illustrated by the comment

> *...And now I have to get on with it. Living in life and doing what's good for me because I'm worth it. How's that for an affirmation!*

While the majority of the sedentary behaviour in this sample was associated with a belief that positive health outcomes of physical activity are not likely, the above example illustrates the influential roll of self-concept on physical activity participation, thus suggesting a position for this construct within the presented model. Further research is warranted to more clearly determine the role of self-concept on physically active behaviour.

Presented to this point is a description of the way in which the dialogue from the seniors formed the basis of this model of physical activity participation. Enhancing this information are a number of other findings from the research. Social reinforcement warrants further

discussion in this research due to it's apparent robust influence on the initiation and maintenance of physically active behaviour. Furthermore, a number of interesting gender issues which emerged from the dialogue will be discussed.

Social Reinforcement

While it was demonstrated that social reinforcement had an effect on the personal experience of physical activity, the dynamic, instrumental effect of social reinforcement on physically active behaviour illustrated in this data set demands further discussion.

While it was previously mentioned that the absence of positive social reinforcement had a curtailing effect on physically active behaviour for some individuals, it is possible that with a high degree of the other associated factors (eg. self-efficacy, or a physically-active personal identity) that this lack of positive reinforcement may not be exclusively essential to physical activity participation. Perhaps more significant to physically active behaviour is the *absence* of negative social reinforcement for physical activity. From the dialogue, it was blatantly obvious that for one participant, the proximal presence of negative social reinforcement was the crucial factor of her physical inactivity. Once emancipated from this negative reinforcement, she felt *free* to act upon her activity desires.

> *I was the stay-at-home housewife. Very much a doormat, and very much under my husband's thumb. But all of a sudden, I didn't have anyone saying, 'You shouldn't be doing this.' or 'Why would you want to do that?' or 'You're too old for that.' So I just started going.*

Conversely, while positive social reinforcement played a significant role in the initiation and maintenance of physically active behaviour, it is not accurate to assume that the presence of positive social reinforcement for physical activity guarantees physically active behaviour. For example, a number of the inactive seniors did, in fact, report positive social reinforcement for physically active behaviour from family and friends, however, this presence did not alter their sedentary behaviour. In each of these cases, one of the other

associated factors with physical activity came into play; this over-riding factor was a lack of self-efficacy.

Regardless of how social reinforcement came into play, it's influencing effect is certainly dynamic, manifesting from a variety of sources and in a number of forms. Following is a presentation of the effect of the verbal and behavioural social reinforcement that the active seniors received from their families, friends and health professionals.

Family.

The family appeared to be an important source of verbal and behavioural reinforcement for a physically active lifestyle for both the men and the women. When asked how her family feels about her being active, *Mrs Germany* replied

> *They're active too! You should see my kids - you wouldn't believe it! ...Oh yes, yes, they're very supportive of me.*

Further, *Mr Gymnast* stated,

> *My youngest son got me started... 'Well Dad, why not try it?'... My youngest son and the team he was on really encouraged me to work hard in the gym and to learn things. I got lots of encouragement from them.*

Health professionals and rehabilitation programs.

A number of the active seniors were involved in rehabilitation programs either due to an acute medical event, or as a precautionary measure for a cardiac event. A great deal of reinforcement to continue with physical activity stemmed from these rehabilitation programs and the medical professionals involved.

Common experiences in the rehabilitation programs were feelings of empathy, interest and remedy of the problem expressed toward the patients by the medical professionals involved. Additionally, the physiological information provided to the respondents and the experience

of the physiological benefits throughout the program lead to an increased understanding of the functions of the body and the role physical activity plays in regard to these functions. These compounding factors tended to leave the respondents with deep-seeded cues or powerful reminders to continue with activity. After an acute angina attack, *Mr Rehab* was involved in a rehabilitation program.

> *[The cardiologists involved with the rehabilitation program] took extreme interest in my welfare. [The program involved] basically a lot of exercise, learning how to diet, learning how to eat out, learning how to relax. Learning how to laugh. In other words, learning how to do the proper things.... The beauty of it was that there were four of us exercising and there were four nurses, and they'd put on marching music and then we'd do exercises for an hour. But you were hooked up to cardiovascular equipment, with a T.V. monitor. The first day or two, they let you watch...they asked how you felt and you could see how you should feel because of the ongoing results on the television screen. But after a while of the watching, you knew how you felt, and they took the TV and put it behind you, and then they used to ask you how you felt on a scale of one to 20, and you got it right. And I now know...I could tell you what my pulse is...it will be 68. I know what my blood pressure should be. I exercise and I know how to build up to a strenuous exercise, and then at the end I slowdown for five minutes. I find that two minutes is actually good enough or me, because I know how my pulse is going.*

> *I learned a lot. That's why I think that it is marvellous when you have all this paid for, and you do it and there are all these experts analysing us and they tell us, so I know by my feel when I'm swimming...They won't let you exert yourself...you just need to know your limits.*

Further evidence of the cues that health professionals provided for physical activity participation are provided by *Mr Gymnast* who mentioned that he is constantly provided with

positive reinforcement for his physically active lifestyle by health professionals.

> *Both my doctors, the heart doctor and the GP, they both encourage me to keep active. They say a line in there about 'don't overdo it, but do what you can as long as you feel good'. They both encourage me to keep this [activity] up. They're quite happy with the condition I'm in after what I went through. Because most heart patients don't go through what I went through, since they opened me up four times. And they continue to tell me that if I hadn't have been in such good shape I'd never have lived.*

General public.

Another source of social reinforcement for physical activity is the general public, illustrated by this comment from *Mr Gymnastics.*

> *Almost everybody I meet says, 'Keep it up. You're looking so good, and you're so active. You don't look your age at all. Keep it up, what you're doing.' I get encouragement from almost everybody I meet.*

Perhaps another cue for *Mr Gymnast* to continue is his self-imposed role model status. He feels the need to demonstrate "in the flesh", his message to other people about physical activity and health.

> *I've been on TV a few times. I never turn them down because I like the public to know what people my age can do if they work at it , and if they look after themselves. As you know, and as everybody knows, we see a lot of people who are 50 and 60 and are in terrible shape. You look at them and you think that is tough and that's too bad. I like to be able to get out and show people what a man my age can do... I like to get across to people to start. If they are 40 or 45, get busy and get active, get exercising, get in shape and look what can happen to you. You could quite likely be in as good shape as I am, and in as good health as I am at my age, and be able to do things that I can at my age. I like to advertise that when I can...You can keep in good health*

if you keep exercising and looking after your body.... The only way I can encourage [others] is to go out in the public and do *it.*

Friends/groups.

The social reinforcement provided to the active participants from the sources discussed to this point has been largely *verbal* in nature. Many of these active participants, however, report a great deal of *behavioural* reinforcement from their friends. For example *Mr Gymnast* stated,

Most of my friends - nearly all of my friends, are people that are involved in active programs.

While *Mrs Liberated Widow* mentioned,

Most of my friends do something, pretty much. They walk or play tennis or something. A couple of close friends...I do something with.

The behavioural type of social reinforcement appears to be a very important cue to sustain physical activity participation, probably as a result of the feelings of empathy, encouragement and support that are abound within these groups. *Mr Walker* stated,

"Yes. It motivates me more. That's what was good about the aerobics class."

Additionally, *Mrs Germany* mentioned,

"The four of us, we do these things... We, as the four of us, we all encourage each other, you know."

Perhaps most telling of the power of peer behavioural reinforcement for physical activity is the following comment from *Mr Gymnast,*

There are five of us mainly who have been training together for quite a few years. Its a good group and we work hard in the gym. We always do our best to work together as a team. It's a good team. Just a good bunch of

fellows. It's a very enjoyable sport with that group. It's not just because I like gymnastics, I think it's the group too, that keeps me going, and every morning that group doesn't want to quit.

It was observed that various forms of positive social reinforcement, from a variety of sources, served as important cues to sustain physical activity. This social reinforcement came from such sources as the individual's family, and even from the general public. Health professionals and rehabilitation programs also provided meaningful reinforcement for physical activity participation. Perhaps most significant, was the reinforcement presented by peers who were also active. This behavioural form of reinforcement appears to be very highly regarded by these seniors and consequently presents as a significant motivating cue to maintain physical activity.

A most intriguing point revealed when analysing social reinforcement was the possibility of gender differences. While the individual's spouse appeared to be a source of social reinforcement, it triggered the question of reciprocality of social reinforcement between husband and wife. The following section will discuss this matter and then present a number of other gender differences that were observed in this data set.

Gender Differences

In discussion of the social reinforcement for physical activity, a number of the active men mentioned support from their wives for their physical activity involvement. However, none of the women reported positive reinforcement for physical activity from their husbands. In response to the invoked question of why this is - in this case, it was due to the fact that none of these women had husbands. However, this fact poses more questions. Is this fact suggesting then that active women are those without husbands? If these women had husbands, would they receive positive social reinforcement for physically active behaviour? The only mention by a woman of social reinforcement received from her husband, was in fact negative. As presented above, this negative social reinforcement stifled her activity

participation. This data is hinting toward possible gender differences pertaining to reinforcement for physical activity. In light of this small sample, and limited data on this specific area, further research is required to determine more clearly, both the role of social reinforcement on physically active behaviour, and also the reciprocality of reinforcement between men and women.

While the active men and women each had health and wellbeing goals, the underlying premise of these goals exemplified another gender difference. The majority of the active women articulated a specific reason to maintain their health and well-being. This goal was fuelled by their feelings of responsibility - specifically, their responsibility to remain healthy, in order to maintain their independent lifestyles. One of the women was concerned for her own wellbeing, since she had no immediate companionship,

> *"I live alone, so there is no one to take care of me if I get sick."*

Furthermore, the remaining women were concerned about the potential of becoming a *burden* on their families. It seems that these women have assumed the *caregiver* responsibilities and are perhaps not comfortable with the possibility of the *care-receiver* role. For example,

> *"Well, I'm single now and I have a family that I sort of feel responsible for to keep myself in good health..."*

> *"...As long as you're healthy and can live on your own and you don't have anyone else worried about you then you're fine."*

None of the men mentioned any concern about future personal care.

Part 3 - Summary and Implications

The present research did, in fact, help to answer the question of what motivates some seniors to be physically active, and what internal barriers prevent others from participating in physical activity. The dialogue from this sample orchestrated the development of a model identifying significant cognitive processes relating to physically active behaviour (see Figure 1). This model thereby identified significant cognitive barriers and facilitating beliefs for physically active behaviour. Physical activity was dependent on beliefs relating to the outcomes of physical activity. The active seniors were those who believed the expected outcomes of physical activity would assist in the attainment of their goals. The inactive seniors were those who did not believe that the outcomes of physical activity would assist with the attainment of their goals.

Fortunately, from an intervention perspective, the nature of beliefs are such that they are malleable and subject to influence. It appears that a means to positively influence outcome beliefs, and thereby physically active behaviour, is a positive experience of physical activity. This point illustrates a self-perpetuating negative cycle in terms of physical activity participation. Those who are not active do not experience the positive outcomes of physical activity, thereby reinforcing their inactive behaviour. So, if we just got the inactive people active, they could experience the positive outcomes, which would then help motivate them to be active! Obviously, the problem remains the same - How then do we activate these inactive individuals? How can we help the inactive seniors experience positive outcomes of physical activity? The solution must be broken down into two parts. In order to experience *positive* ouitcomes of physical activity, the individual first must experience some form of physical activity.

The data from this research illustrates a number of factors that must be addressed in order for an individual to experience physical activity. First of all, the individual must feel capable of performing the specific behaviour. Perceived self-efficacy was demonstrated to have a

profound effect on personal experience of physical activity. If the individual did not perceive self-efficacy for physical activity, they would consequently avoid the behaviour. An important distinction must be noted at this point. While a lack of self-efficacy was cited by many of the inactive seniors as an explanation for their sedentary behaviour, physical activity was perceived as synonymous with sport. - The lack of self-efficacy described by these individuals related to *sport*, leading to the avoidance of *all* physical activities. From an intervention perspective, this point must be illustrated to seniors. Their competence at performing *physical activities*, such as walking, for example, must be pointed out, and as such could become a positive determining factor when making self-ascriptions of efficacy.

The second pertinent factor related to experiencing physical activity is that of social reinforcement. The present data illustrate that a definite requisite for physical activity is the absence of negative social reinforcement, due to it's significant stifling effect on physically active behaviour. Conversely, the presence of positive social reinforcement was demonstrated to positively influence the initiation and maintenance of physical activity participation. The data illustrated that this positive social reinforcement is more effective for encouraging physically active behaviour if it is behavioural, rather than verbal, and by a peer who is significantly regarded by the individual.

Illustrated above are important factors to encourage the participation of physical activity, however, the second aspect of this intervention discussion pertains to the factors which must be addressed in order to facilitate a *positive* experience of physical activity. Highlighted in the dialogue from this sample was the fact that feelings of success and enjoyment lead to the perception of a positive experience of physical activity. In terms of facilitating enjoyment, the activity must manifest positive physical feelings, as opposed to pain or discomfort, for example. In terms of facilitating the perception of success, an environment or situation conducive to success is essential. Success, in this sample, referred to the outcome of the activity, but also to the performance, or process of the activity, regardless of the material outcome. Therefore, the provision of meaningful and positive feedback to the individual

regarding the process and/or the material outcome of the activity could help to bolster or maintain the individual's perception of self-efficacy, thereby facilitating future participation.

While the cognitive processes identified for physical activity motivation and adherence were the same for men and women, a gender distinction was observed in the underlying beliefs driving these processes. Both men and women were motivated to be active as a consequence of their goal to maintain their personal health and well-being, however, the women specifically stated that a feeling of responsibility was the driving force behind this goal. Another gender distinction observed, requiring further investigation, was the fact that the active women were those without husbands. The significance of this occurrence and causative factors for this association are begging further investigation.

Evident in the above discussion is the support revealed for a number of theoretical components of physical activity motivation and adherence. Future research could further explore the role of self-concept in relation to physical activity participation in addition to more deeply investigating possible gender differences which were alluded to in the present study. It is believed that the findings of this research could assist in the development of interventions designed to maintain or improve functional abilities of older adults. The importance of this intervention would be that of facilitating an increase in the quality of life of seniors and thereby decrease the disproportionate demand of the elderly on health care services.

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APPENDIX A
Consent Form

Toward A Theory of Older Adult Physical Activity Motivation
Principal Investigator: Sandra O'Brien Cousins, Ed.D
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I give my consent to be involved in an interview aimed at identifying some of the beliefs that older people hold about physical activity. I understand that there are no right or wrong answers, and that everyone's opinions and ideas are valued.

I understand that the interview will last about an hour and go no longer than 90 minutes and that I do not have to answer all the questions asked of me. Furthermore, I can end the interview at any time I wish by a simple request to stop at any time without prejudice to myself.

I give my consent to be audiotaped so that my answers can be documented accurately in an anonymous typed transcript at another time. My identity will be kept confidential by keeping the transcript anonymously labelled and stored in a secure place. When the taped dialogue is typed up, the original tape and all reference to me will be erased.

The details of the study have been explained to me. I understand the nature of the study and I have had an opportunity to ask questions.

_____ Signature of Participant Date _____

APPENDIX B

Interview Plan for Active Seniors

Active adult:

This study is exploring the beliefs older people hold about their health and well-being. You do not have to answer any questions which make you feel uncomfortable. Please ask me to explain anything that you do not understand. There are no right or wrong answers - only your opinion is what is important. I would like to tape your answers if that is okay.

Previous research indicates that you are a physically active person. We are interested in why you are so active. Could you tell me a little bit about why you are active?

What kinds of activities do you do?

What motivates you to do these activities?

Do you have any short or long term goals with these activities?

What are the specific benefits of being active for you? Are these immediate or long-term benefits?

How did you learn about these benefits?

Is there anything about exercise and sport which sometimes makes you want to quit?

What is the negative side of being active?

How do you deal with the negative side of activity?

Are your friends as active as you are?

If not, why do you think they are less active?

Have you ever tried to encourage other people to be more active? How do they respond?

Who encourages you the most for your activity?

Is your family, friends, physician, or another individual your best supporter for staying active?

What are your main goals in life?

Does physical activity assist with these main goals?

Is there anything else you would like to tell me?

APPENDIX C
Interview Plan for Inactive Seniors

Inactive adult:

This study is exploring the beliefs older people hold about their health and well-being. You do not have to answer any questions which make you feel uncomfortable. Please ask me to explain anything that you do not understand. There are no right or wrong answers - only your opinion is what is important. I would like to tape your answers if that is okay.

Previous research indicates that as people get older they often cut back on their previous physical activities. Some older people are actually quite athletic, others are actually quite sedentary. We are interested in why some older people slow down more than others. Could you tell me a little bit about yourself in this regard?

Is there an activity that you sometimes wish you did more often?

What would be the value or the benefit of for you to do this activity more often?

What would really motivate you to do this activity?

If you did this activity at your desired level, would you have certain expectations about what you would hope to achieve?

What would be the specific benefits of being more physically active for you? Are these immediate or long-term benefits?

How did you learn to expect about these benefits?

Is there anything about physical activity that stops you from participating?

What is the negative side about being active?

How do you deal with the negative side of activity?

Are your friends as active as you are?

If not, why do you think that they are pursuing activity differently?

Has anyone ever tried to encourage you to be more active? How do you respond?

Who would be more likely to encourage you to be more active? Your family, friends, physician, or another individual?

What are your main goals in life?

Does physical activity assist you in any way in reaching these main goals?

Is there anything else you would like to tell me?